

REMARKS

Claims 1-10 are pending in the application and were rejected for obviousness. The rejections are addressed below.

Applicant first requests clarification as to whether references cited in the Information Disclosure Statement were considered. The Office Action states that certain information was placed in the file but was not considered. The copy of the Form PTO 1449 indicates that references considered except where lined through, but none of the references were lined through. Applicant thus requests confirmation as to whether which references have been considered. If the Japanese patent is not being considered, Applicant at least requests consideration of the English language abstract that was submitted.

The claims were objected to for including reference characters that are not enclosed within parentheses. Claims 7 and 9, which include such reference characters, were amended to include parentheses, accordingly.

The obviousness rejections are now addressed.

Claims 1-3 and 5-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fenick, U.S. Patent No. 5,015,183. This rejection is respectfully traversed.

Fenick teaches a method of producing stent for guiding the location/direction for the insertion of an implant comprising the steps of forming a plaster cast modeling of a mouth state using a plastic replica, manufacturing a plastic cast model having an occlusal surface of the location for the insertion of the implant using the plaster cast, fastening a plastic plate 42 having on corners thereof a plurality of metal markers 41A-41F to an upper end of the plastic cast model 40 and obtaining a computed tomographic image of the mouth after placing the plastic cast

model, on which the plastic plate is fastened, in the mouth and forming a hole on a predetermined position in the stent to correspond to both a location and a direction for the insertion of the implant determined by a dentist base on the CT image. However, *Fenick's method has the problem that a dentist confirms the positional relationship between the indicating material and the jawbone observed in the CT images WITH THE NAKED EYE* prior to forming the guide hole on the stent at the desired and reevaluated position. As such, **the manufacture of the stent and the use of the same depend only on the experience and senses of the dentist.** Therefore, there is a probability of error occurring in Fenick's method. As well, in the substantial implant operation, errors may also occur. In contrast to Fenick's method, the present invention provides methods of safe and correct dental implant operation *WITH COMPUTERIZED ANALYSIS.*

Furthermore, the present invention provides the following advantages:

- (a) There is a difference between the method of present invention and Fenick's method in that the drilling direction is in the reverse. In particular, in the present invention plain plastic plate is used so that it is possible to drill a stent for making a guide hole in a way such that the plain side of plastic plate goes to the bottom. As the plastic plate goes to the bottom, the drilling of the stent can be stabilized to make precise a guide hole. In contrast, in Fenick's method, the stent is drilled in a way from up to down so that the stent is not stabilized correctly and therefore the guide hole is not precisely drilled. In addition, the method of present invention does not harm the mouth model, so that the cost for remaking the mouth model can be saved.
- (b) As the plastic plate fastened to stent of the present invention can be manufactured

in a standardized size, the plastic plate can be manufactured by method of mass production. Therefore, the cost for manufacturing stent goes down.

- (c) When determining the angle of drilling, Fenick's method evaluates angles such as shown in Fig. 9 and 9A, however, the angle along the direction of X-ray opaque strip (41A to 41F in Fig. 5 of Fenick) cannot be used for determining angle of implantation. But, the present invention use 3-dimensional point (X, Y, Z axes) by analyzing CT image. Therefore, the method of implantation according to the present invention is more precise.

In view of the above, Applicant requests that the rejection of claims 1-3, 5, and 6 over Fenick be reconsidered and withdrawn.

Claim 4 was rejected under 35 U.S.C. § 103(a) for obviousness over Fenick, U.S. Patent No. 5,015,183, in view of Klein et al., U.S. Patent No. 5,967,77, and claims 7-10 were rejected for obviousness over Klein. This rejection is respectfully traversed.

With respect to Fenick, Applicant refers to the statements above. In regard to Klein, we note that Klein's method was cited by present inventors in a paragraph indicated with [0044] of the specification of the present invention. In the paragraph [0044], it is stated that there is a difference between the implant guide stent of the present invention and Klein's technique disclosed in US Patent No. 5,967,777 as follows:

“in the present invention, the metal balls are previously placed on the planar plastic plate as shown in FIG. 3, and thereafter, the plastic plate having the metal balls is attached to the dental plastic replica. In addition, the present invention does not require the process shown in FIG. 5 of US Patent No. 5,967,777. Furthermore, in US Patent No. 5,967,777, a separate pin must be tightened into a lower part of the radiopaque fiducial marker to fasten the radiopaque fiducial marker to a predetermined position during a drilling process, as shown in FIG. 10. In other words, it is necessary that a separate device be mounted on an existing

CNC milling machine. However, in the implant guide stent of the present invention, because the planar plastic plate is used, the stent is easily fastened in the CNC milling machine. Therefore, the guide hole can be simply formed on the stent without a separate fastening device.”

In view of these differences, Applicant request reconsideration of the rejections over Fenick and Klein.

CONCLUSION

Applicant submits that the claims are in condition for allowance, and such action is respectfully requested. If there are any charges or any credits, please apply them to Deposit Account No. 03-2095.

Respectfully submitted,

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Susan M. Michaud
Susan M. Michaud, Ph.D.
Reg. No. 42,885

Clark & Elbing LLP
101 Federal Street
Boston, MA 02110
Telephone: 617-428-0200
Facsimile: 617-428-7045